

Course Length: 1.5 hours

Course Objective:

- This class is a Basic H₂S Training course aimed at personnel who risk exposure to hydrogen sulfide.

Course Design:

- Narrated e-learning modules

Successful Course Completion:

- Requires successful completion of knowledge assessment.

Course Outline:

About Hydrogen Sulfide (H₂S)

- Regulations
- Key Terms
 - Auto Ignition
 - Flammable Limits
 - Permissible Exposure Limit (PEL)
 - Threshold Limit Value (TLV)
 - Short Term Exposure Limit (STEL)
 - Ceiling
 - Immediate Dangerous to Life and Health (IDLH)
 - National Institute of Occupational Safety and Health (NIOSH)
 - Parts Per Million (PPM)
- What is H₂S?
- H₂S vs. Other Notable Deadly Gases
- H₂S Common Names
- Characteristics
- Disposal method
- H₂S Limitations
- Where is H₂S found?
- H₂S Accumulation
- H₂S Reactivity

Effects of Hydrogen Sulfide (H₂S)

- Respiratory System Effects
- Respiratory System
 - Diaphragm
 - Trachea
 - Bronchi
 - Alveoli

Hydrogen Sulfide (H₂S) Exposure Limits

- H₂S Signs and Symptoms of Exposure
 - 0-50 PPM
 - 100-300 PPM
 - Olfactory Nerve Paralysis
 - 300-600 PPM
 - 600-1000 PPM
- Phrenic Nerve Function
- Variables Effecting Symptoms

Hydrogen Sulfide (H₂S) Detection

- Methods of Detection (advantages/disadvantages)
 - Colorimetric Tubes
 - Personal Electronic Detectors
 - Fixed Detectors

Respiratory Protection

- Common Effects from Respirator Use
- Why Wear a Respirator?
- Breathing Air Composition
- Employee Control Measures
 - Engineering Controls
 - Administrative Controls
 - Personal Protective Equipment
- Employer Responsibilities
- Respiratory Protection Program Requirements
- Employee Responsibilities
- Types of Respirators
 - Air Purifying
 - Supplied Air
 - Self-Contained Breathing Apparatus (SCBA)
 - Atmospheric Supplied Air
 - Cascade Systems
 - Escape Packs
- Fit Testing
 - Quantitative
 - Qualitative
 - Medical Requirements
- Respirator Usage
- Respirator Inspection
- Respirator Maintenance
- Proper Donning/Doffing

- Respirator Storage

Hydrogen Sulfide (H₂S) Safety

- Arriving at a H₂S Location
- Wind Direction Example
- Affected Employee Requirements
- When H₂S is Present
- Site Location Condition Flags
 - Green – Possible Danger
 - Yellow – Moderate Danger
 - Red – Extreme Danger
- Other Deadly Gases Associated with H₂S
 - Carbon Dioxide (CO₂)
 - Sulfur Dioxide (SO₂)
- Regular Drills
- Rescue

Post Training Evaluation:

- The employer shall ensure that each employee is evaluated to confirm that he/she understands the information provided in the training.

Reference Material / Documents:

30 CFR 250.490

ANSI/ASSE Z390.1—2017 Standard

M&A Safety Services training conforms to OSHA CBT Training standards and ANSI Z490.1. Criteria for Accepted Practices in Safety, Health and Environmental Training. M&A Safety Services LLC. follows all ANSI training criteria.

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